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**Amendment of claim**

Amending claims as agreed upon during the phone interview on November 23, 2004, as follow:

Claim 4. A quantitative method for molecular diagnosis of spinal muscular atrophy (SMA)

comprising:

- obtaining a sample from a human suspected of having SMA containing mRNA of survival motor neuron (SMN-mRNA) and the mRNA of human elongation factor 1-alpha (HUMEF1AB-mRNA)
- reverse transcribing the mRNA using primers consisting of SEQ ID NO:1 for the synthesis of cDNA from SMN-mRNA giving SMN-cDNA and consisting of SEQ ID NO:2 for the synthesis of cDNA from HUMEF1AB-mRNA giving HUMEF1AB-cDNA;
- amplifying the SMN-cDNA by PCR using primers consisting of SEQ ID NO:3 and SEQ ID NO:4 and the HUMEF1AB-cDNA by PCR using primers consisting of SEQ ID NO:5 and SEQ ID NO:6
- immobilizing of the PCR products on a nylon membrane
- hybridizing the immobilized PCR products with radioactive <sup>32</sup>p-dCTP labeled nucleotide probes wherein the probes are generated by PCR amplification of nucleic acids consisting of SEQ ID NO:7 and 8 for exon 7; nucleic acids consisting of SEQ ID NO:9 and SEQ ID NO:4 for exon 8 and, nucleic acids consisting of SEQ ID NO:5 and SEQ ID NO:6 for HUMEF1AB,
- measuring SMN-mRNA by means of BioImager device using the radioactive <sup>32</sup>p-dCTP labeled nucleotide probes by detecting the hybridized probes using

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